

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference OF04P007	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/KR2004/000178	International filing date(day/month/year) 31 JANUARY 2004 (31.01.2004)	Priority date (day/month/year)	
International Patent Classification (IPC) or national classification and IPC G09G 3/30(2006.01)i			
Applicant Leadis Technology, Inc. et al			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand 30 AUGUST 2005 (30.08.2005)	Date of completion of this report 19 MAY 2006 (19.05.2006)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer CHUN, Dae Sik Telephone No. 82-42-481-5871 

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/000178

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☒ This report is based on translations from the original language into the following language English which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☒ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/000178

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1,2	YES
	Claims	None	NO
Inventive step (IS)	Claims	1,2	YES
	Claims	None	NO
Industrial applicability (IA)	Claims	1,2	YES
	Claims	None	NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents.

D1 : JP 1985-119685(1985.06.27)

D2 : JP 2000-221476(2000.08.11)

D3 : JP 2001-318659(2001.11.16)

D4 : US 4,823,121(1989.04.18)

D1 discloses the precharge circuit which precharge the video memory forcibly, for preventing the contents stored in the video memory from being destroyed during the transient time of read/wrire mode.

D2 discloses the precharging method in which applied precharging voltage is varied depending on the position of the data line in each data line block, for making luminance unevenness occurring in a boundary between each blocks inconspicuous.

D3 discloses a pre-charge circuit composed of a level shifter circuit to be controlled by an output of a latch circuit and the latch circuit. Only for a precharging period and the preceding and following periods, the latch circuit is transitioned into an active state and the level shifter circuit is made to operate. Except for the above periods, the latch circuit is transitioned into an inactive state and the level shifter circuit is maintained at an inactive state, and thus, power consumption is decreased in the level shifter.

D4 discloses the control method of EL display, in which by disabling the pre-charge circuit, pull-up charge circuit, etc., during the scanning operation of the line with no illuminating pixel, the power consumption can be reduced.

1. The present invention involves the concept of synchronizing the scan-, data-, and precharging-signals, more specifically, delaying the data-signal until the precharging-signal is applied, hence reducing the row line flashing.

D1~D4 relate to the driving method of a flat panel display which has the function of precharging, but none of the above documents teaches or fairly suggests the synchronization of display- and precharging-signals. Moreover, none of them has the intention to reduce the row line flashing.

Thus, the subject-matter of Claims 1 and 2 seems to be novel and to have an inventive step required in Article 33(2) and (3) PCT.